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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/070,697	04/04/2002	Takashi Mimura	1061-02	9428

35811 7590 07/28/2005

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EXAMINER	
VO, HAI	
ART UNIT	**PAPER NUMBER**
1771	

DATE MAILED: 07/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/070,697	MIMURA ET AL.	
	Examiner	Art Unit	
	Hai Vo	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 June 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *13-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *13-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. The art rejections over Miyakawa et al (US 5,672,409) in view of Ishii et al (US 5,710,856) are withdrawn in view of the Applicants' arguments (see pages 2 and 3 of the 06/30/2005 amendment). However, upon further consideration, new ground of rejections is made in view of Kubota et al (US 4,404,301).
2. Since U.S. Patent No. 5,672,409 was issued more than one year before the effective filing date of the application, there is no need to make the obviousness-type double patenting (OPD) over U.S. Patent No. 5,672,409. The ODP is thus withdrawn.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 13-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyakawa et al (US 5,672,409) in view of Kubota et al (US 4,404,301). Miyakawa teaches a reflector for surface light sources comprising a white film having a three-layer structure A/B/A wherein the B-layer is made of a polyester resin and contains fine voids (column 6, lines 35-40, example 2). Miyakawa teaches a coating layer on the white film comprising a mixture of acrylic resin, silica particles, isocyanate and fluorescent whitening agent (example 5). Miyakawa discloses the white film having the degree of glossiness within the claimed range (table 1). Miyakawa teaches the white film is formed from a resin

composition consisting essentially of polyester (column 3, lines 25-45). Miyakawa teaches that the voids are formed through melt extrusion of a mixture of a polyester resin, a polyolefin resin, and inorganic particles, followed by stretching the film in at least one direction (column 3, line 59 et seq.). Miyakawa is silent as to the coating layer comprising a copolymer of a resin with a light stabilizer component. Kubota, however, discloses the use of a polymeric light stabilizer for the synthetic polymers to eliminate discoloration, loss of mechanical strength upon exposure to light (column 1, lines 10-20). The volatility of the non-polymeric light stabilizer renders it unsatisfactory in stabilizing effectiveness because it is lost when the polymeric matrix is heated at elevated temperature. porous resin sheet (abstract). Kubota discloses the polymeric light stabilizer comprising a copolymer of an acrylic resin and benzophenone (column 2, lines 50, column 17, line 2 and column 26, lines 25-30). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate a polymeric light stabilizer into the coating layer of Miyakawa motivated by the desire to provide the coating layer having better resistance to discoloration upon exposure to light and resistance to embrittlement on ageing and heating.

Miyakawa does not specifically disclose that the voids in the surface layer are smaller than the voids in the inner layer. However, Miyakawa teaches that the A-layer contains inorganic fine particles and the sheet of the laminated polymers A/B/A is stretched in at least one direction (example 3). It appears that

Miyakawa and Applicants are using inorganic particles having similar particle size and present in the same amounts in the A- and B-layers (Miyakawa, column 6, lines 40-42, 60-65 vs. Applicants' specification, pages 10 and 22). Further, Miyakawa is using the same approach to form the voids in the white film. The voids are created around the inorganic particles through stretching. Therefore, it is the examiner's position that the relative void diameter in the A-layer and B-layer would be inherently present because it seems from the claim, if one meets the structure recited, the properties must be met or Applicant's claim is incomplete. This is in line with ***In re Spada***, 15 USPQ 2d 1655 (1990) which holds that products of identical chemical composition can not have mutually exclusive properties.

5. Claims 13-17, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishii et al (US 5,710,856) in view of Kubota et al (US 4,404,301). Ishii discloses a light reflective sheet comprising a porous resin sheet and a protective layer laminated on at least one surface of the porous resin sheet (abstract). Ishii discloses that the protective layer contains a light stabilizer component (column 14, lines 45-48, column 8, line 61). Ishii teaches the coating layer further comprising inorganic fine particles (column 13, lines 60-62). Ishii teaches a light reflective sheet having a light reflectance greater than 85% (table 1). Ishii teaches a porous resin layer comprising a fluorescent brightener (column 8, lines 50-57). Ishii does not specifically disclose the protective layer containing a polymeric light stabilizer which is a copolymer of acrylic resin and

benzophenone. Kubota, however, discloses the use of a polymeric light stabilizer for the synthetic polymers to eliminate discoloration, loss of mechanical strength upon exposure to light (column 1, lines 10-20). The volatility of the non-polymeric light stabilizer renders it unsatisfactory in stabilizing effectiveness because it is lost when the polymeric matrix is heated at elevated temperature. porous resin sheet (abstract). Kubota discloses the polymeric light stabilizer comprising a copolymer of an acrylic resin and benzophenone (column 2, lines 50, column 17, line 2 and column 26, lines 25-30). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate a polymeric light stabilizer into the coating layer of Ishii motivated by the desire to provide the coating layer having better resistance to discoloration upon exposure to light and resistance to embrittlement on ageing and heating. Ishii does not specifically disclose the degree of glossiness of the light reflective sheet. However, the light reflective sheet of Ishii as modified Kubota is structurally the same and made of the same materials as Applicants' article. It appears that the light reflective sheet of Ishii as modified by Kubota has a light reflectance within the claimed range. Therefore, it is not seen that the modified light reflective sheet would have possessed the degree of glossiness outside the range as claimed by the present invention. This is in line with ***Ex part slob***, 157 USPQ 172. It seems from the claim, if one meets the structure recited, the properties must be met or Applicant's claim is incomplete.

6. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishii et al (US 5,710,856) in view of Kubota et al (US 4,404,301), as applied to claim 13 above, further in view of Miyakawa et al (US 5,672,409). Ishii does not disclose the porous resin layer being a composite film. Miyakawa, however, teaches a reflector for surface light sources comprising a white film having a three-layer structure A/B/A wherein the B-layer contains fine voids (column 6, lines 35-40, example 2). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the porous resin layer in the form of a composite film having a layer construction as taught by Miyakawa motivated by the desire to provide to enhance structural stability of the white film.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (571) 272-1485. The examiner can normally be reached on M,T,Th, F, 7:00-4:30 and on alternating Wednesdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information

for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HV

Hai Vo

HAI VO
PRIMARY EXAMINER